

(12) United States Patent

King et al.

(54) METHOD FOR INDICATING LOCATION AND DIRECTION OF A GRAPHICAL USER INTERFACE ELEMENT

(75) Inventors: **Bennett M. King**, San Diego, CA (US); Thomas E. Kilpatrick, II, San Diego,

CA (US)

Assignee: QUALCOMM Incorporated, San

Diego, CA (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 443 days.

Appl. No.: 12/553,243

(22)Filed: Sep. 3, 2009

(65)**Prior Publication Data**

> US 2010/0066643 A1 Mar. 18, 2010

Related U.S. Application Data

Provisional application No. 61/095,225, filed on Sep. 8, 2008.

(51) Int. Cl.

G06F 3/14 (2006.01)G06F 1/16 (2006.01)G06F 3/0488 (2013.01)

H04M 1/02 (2006.01)

(52) U.S. Cl.

CPC G06F 3/1446 (2013.01); G06F 1/1616 (2013.01); G06F 1/1641 (2013.01); G06F 1/1649 (2013.01); G06F 1/1654 (2013.01); G06F 1/1677 (2013.01); G06F 1/1684 (2013.01); G06F 1/1694 (2013.01); G06F 3/0488 (2013.01); G06F 3/1454 (2013.01); G06F 2200/1614 (2013.01); G06F 2200/1635 (2013.01); H04M 1/0216 (2013.01); H04M 1/0247 (2013.01); H04M 2250/12 (2013.01)

USPC 345/1.1; 345/173

(10) **Patent No.:**

US 8,947,320 B2

(45) Date of Patent:

Feb. 3, 2015

(58)Field of Classification Search

None

See application file for complete search history.

(56)References Cited

U.S. PATENT DOCUMENTS

6.133,898 A 10/2000 Ludolph et al. 6,252,563 B1* 6/2001 Tada et al. 345/1.1

(Continued)

FOREIGN PATENT DOCUMENTS

CN CN 1484068 A 3/2004 1575117 A 2/2005

(Continued)

OTHER PUBLICATIONS

International Search Report—PCT/US2009/056288—International Search Authority, European Patent Office, Dec. 11, 2009. (Continued)

Primary Examiner — Joseph Haley

(74) Attorney, Agent, or Firm — James R. Gambale, Jr.

(57)ABSTRACT

In a particular embodiment, a method includes receiving a user input at a first display surface of an electronic device to move a graphical user interface element displayed at the first display surface. The electronic device includes a second display surface separated from the first display surface by a gap. The method also includes determining that at least a portion of the graphical user interface element is to be moved beyond an edge of the first display surface into the gap such that the at least a portion of the graphical user element will not be displayed at the first display surface. The method further includes displaying the at least a portion of the graphical user interface element at the second display surface based on a location and a direction of movement of the graphical user interface element at the first display surface.

33 Claims, 46 Drawing Sheets

